ABSTRACT OF THE DISCLOSURE

A system is provided for finding the result of a binary operation performed on an array of values, along with its address, in a storage-efficient manner. The system is based on

5 a binary tree structure having a pipeline of binary operators and corresponding multiplexers and storage elements to store the outputs of the multiplexers in addition to the partial addresses of the outputs represented by the outputs of the binary operators. Each computation stage adds one more bit of

10 address until the address is completely known at the last computation stage. The invention reduces the amount of storage required for keeping track of the addresses that are the result of the binary operation.

ALA-106
February 21, 2000